

REMARKS

Applicants request favorable reconsideration and allowance of the present application in view of the foregoing amendments and the following remarks.

Claims 1, 6-10, 15-19, 24-29, and 31 are pending in the present application.

Claims 1, 10, 19, and 31 are the independent claims. Claim 3, 4, and 12-14 have been cancelled without prejudice.

Claims 1, 10, 19, and 31 have been amended. Applicants submit that support for the amendments can be found in the original disclosure and that no new matter has been added.

Claims 1, 3, 4, 6-10, 12-18, 28-29, and 31 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Examiner requested clarification as to whether a player is also an observer. Applicant has amended the claims to further clarify the distinction between a player and an observer. The Examiner also objected to certain terms as allegedly lacking sufficient antecedent basis. Without conceding the propriety of this rejection, Applicants have amended the claims to further clarify the antecedent basis. Favorable reconsideration and withdrawal of this rejection are requested.

Claims 1, 3, 4, 6-10, 12-18, 28-29, and 31 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,317,127 (Daily) in view of U.S. Patent No. 6,522,312 (Ohshima et al.) and the article by Szalavari et al. (Szalavari). Claims 19 and 24-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Daily in view of Ohshima et al., Szalavari, U.S. Patent No. 6,624,853 (Latypov) and U.S. Patent No. 6,445,815 (Sato). These rejections are respectfully traversed.

As recited in independent Claim 1, the present invention is directed to an augmented reality presentation apparatus having an objective viewpoint augmented reality presentation means and a player's viewpoint augmented reality presentation means. Further, the objective viewpoint augmented reality presentation means recited in Claim 1 presents to an observer an augmented reality view viewed from an objective viewpoint position, which differs from a viewpoint position of any player and includes, *inter alia*, first video sensing means for sensing a video of a real space, including a player who is experiencing an augmented reality. In addition, as recited in Claim 1, an augmented reality video viewed from a player's viewpoint position is displayed on a screen of a head-mounted display worn by a player, and an augmented reality video viewed from the objective viewpoint position is displayed on an observer's display apparatus that is separate from a head-mounted display worn by any player.

With the above features, a player can view an augmented reality video that shows a real space and a virtual object from the player's viewpoint position while being free to move about since he is wearing a head-mounted display. On the other hand, an observer can view a different augmented reality video that shows the real space, *including a player who is experiencing an augmented reality*, and a virtual object from an objective viewpoint, and the observer can view this video on a display apparatus that is separate from any player's display apparatus and is not being worn by any player.

Applicants submit that the cited art fails to disclose or suggest at least the above-mentioned combination of features. In particular, Applicants submit that the cited art, even when considered in combination, fails to disclose or suggest at least the feature of sensing a video of a real space from an objective viewpoint, including a player who is

experiencing an augmented reality, and displaying a composed augmented reality video including the sensed video on a display apparatus that is separate from a head-mounted display worn by any player.

Daily discloses a technique for extracting an area from an image sensed by a camera, based on an observer's visual axis, and composing the extracted area with a computer graphic (CG).

Ohshima merely discloses an apparatus that allows two players to play air hockey in a mixed reality (MR) space, as shown in Fig. 2. An image obtained by composing a sensed image sensed by TV camera 240 with a CG of a puck is output to a head-mounted display (HMD) 210.

Similarly, Szalavari discloses a system for playing a game used an augmented reality (AR) technique, like the system in Ohshima. In this regard, Applicants submit that Fig. 2 of Szalavari shows an outside appearance of the system. Although the Examiner asserts that a virtual object (i.e., a card) is composed in Fig. 2, that figure shows an actual image and therefore a virtual object is not shown in Fig. 2. Instead, an object held in the hand in that figure is a real object. Moreover, Applicants submit that an image obtained by composing an image like that of Fig. 2 and a CG, which appears at a head in Szalavari with an indication "view of a player," is not an image from an objective viewpoint. Instead, Applicants submit that such an image is merely an image from the viewpoint of another player, e.g., a third player (the game of mah-jong has four players).

None of the cited art discloses an augmented reality view viewed from an objective viewpoint position which differs from a viewpoint of any player, or means for sensing a video of a real space including a player who is experiencing an augmented

reality, viewed from the objective viewpoint. The Examiner asserts that a camera in Daily corresponds to the objective viewpoint augmented reality presentation means. Applicants respectfully submit that the Examiner is incorrect in asserting that the image of a user is included in the video of the wide field of view (FOV) captured by a camera in Daily (fish eye lens 172 or geodesic array of sensors 170). To the contrary, Daily discloses that the camera is mounted on the underside of an airplane or on top of an airplane, and therefore it captures an image of the external world of the airplane. The image from that camera cannot include a player experiencing an augmented reality.

Accordingly, Applicants submit that the present invention recited in independent Claim 1 is patentable over the cited art, whether that art is considered individually or taken in combination.

The other independent claims recite similar features and are believed patentable for reasons similar to Claim 1. The dependent claims are believed patentable for at least the same reasons as the independent claims, as well as for the additional features they recite.

In view of the foregoing, Applicants submit that this application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-mentioned Office Action, and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicants
Brian L. Klock
Registration No. 36,570

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
BLK/mls

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